

## ABSTRACT

An automated synthesis apparatus for carrying out chemical reactions with reflux cooling including one or more reactor modules each having one reactor, one or more feed vessels each for a liquid reactant or reactant mixture, and one or more metering and feed devices for introduction of liquid reactant or reactant mixture from the one or more feed vessels into the one or more reactors. Each reactor has a lid configured as a hollow body to enclose a hollow space, with an inlet line and an outlet line for a heat transfer medium into or out of the hollow space and with one or more through-lines for introduction of each liquid reactant or reactant mixture into the reactor.